UNIVERSITI PUTRA MALAYSIA

MEDIATING ROLE OF E-LEARNING QUALITY BETWEEN ORGANIZATIONAL LEARNING AND E-LEARNING AMONG CORPORATE E-LEARNERS IN A MALAYSIAN COMPANY

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By

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June 2021

Chairman : Mohd Hazwan Mohd Puad, PhD
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Ideally, poor e-learning use should not be an issue among corporate e-learners because e-learning enables organizations to effectively integrate learning into their employees' day-to-day work. However, many companies have found that their e-learning systems are often underused. This indicates that employees are not getting the requisite training, leading to poor performance and productivity, and high turnover.

Unfortunately, previous studies have not studied e-learning use in the context of organizational learning and e-learning quality (Yakubu & Dasuki, 2018; Liu et al., 2012), despite their influence on e-learning use (Al-Fraihat et al., 2020; Wang, 2018). Furthermore, there is limited corporate e-learning research in Malaysia as the focus has been on the education sector. Therefore, the purpose of this study was to examine the relationships of e-learning quality, organizational learning and e-learning use.

A descriptive correlational research design with a quantitative survey method was used in this research. The questionnaire was adapted from the E-learning Success System (ELSS) and the Strategic Learning Assessment Map (SLAM) instruments. Data from 261 employees of an oil and gas company in Sarawak, Malaysia was analyzed through IBM SPSS 23.0 and AMOS 23.0.

The findings show that males, the non-technical departments, management and senior e-learners had higher levels for e-learning quality, organizational learning and e-learning use. Also, e-learning quality fully mediated the relationship between organizational learning and e-learning use ($\beta = 0.65$, $t = 1.98$, $p < 0.05$)

with a medium effect size and the mediation model explained 51.2% of the variation on e-learning use. The main barrier to e-learning use was time constraints and improving e-learning content was the most popular suggestion to increase e-learning use.

In conclusion, this study gave useful insights on the relationships between organizational learning, e-learning quality and e-learning use. It proposes a parsimonious higher-order structural equation model to study corporate e-learning more effectively and presents individual-level perceptions on e-learning for researchers and practitioners.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

PERANAN KUALITI E-PEMBELAJARAN SEBAGAI PENGANTARA DI ANTARA PEMBELAJARAN ORGANISASI DENGAN E- PEMBELAJARAN DALAM KALANGAN PEKERJA DI SEBUAH SYARIKAT DI MALAYSIA

Oleh

SHARMINI MARILYN BALAKRISHNAN

Jun 2021

Pengerusi : Mohd Hazwan Mohd Puad, PhD
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Sebaik-baiknya, penggunaan e-pembelajaran yang buruk seharusnya tidak menjadi masalah di kalangan e-pembelajar korporat kerana e-pembelajaran membolehkan organisasi mengintegrasikan pembelajaran dengan berkesan ke dalam kerja seharian pekerja mereka. Walau bagaimanapun, banyak syarikat mendapati bahawa sistem e-pembelajaran mereka sering tidak digunakan. Ini menunjukkan bahawa pekerja tidak mendapat latihan yang diperlukan, menyebabkan prestasi dan produktiviti yang buruk, dan kadar pusing ganti yang tinggi.

Malangnya, kajian terdahulu belum mengkaji penggunaan e-pembelajaran dalam konteks pembelajaran organisasi dan kualiti e-pembelajaran (Yakubu & Dasuki, 2018; Liu et al., 2012), walaupun terdapat pengaruhnya terhadap penggunaan e-pembelajaran (Al-Fraihat et. al., 2020; Wang, 2018). Tambahan pula, terdapat penyelidikan e-pembelajaran korporat yang terhad di Malaysia kerana tumpuan telah diberikan kepada sektor pendidikan. Oleh itu, tujuan kajian ini adalah untuk mengkaji hubungan kualiti e-pembelajaran, pembelajaran organisasi dan penggunaan e-pembelajaran.

Reka bentuk kajian korelasi deskriptif dengan kaedah tinjauan kuantitatif digunakan dalam penyelidikan ini. Soal selidik ini diadaptasi dari instrumen E-learning Success System (ELSS) dan Strategic Learning Assessment Map (SLAM). Data dari 261 pekerja sebuah syarikat minyak dan gas di Sarawak, Malaysia dianalisis melalui IBM SPSS 23.0 dan AMOS 23.0.

Hasil kajian menunjukkan bahawa lelaki, jabatan bukan teknikal, pihak pengurus dan e-pelajar senior mempunyai tahap yang lebih tinggi untuk kualiti e-pembelajaran, pembelajaran organisasi dan penggunaan e-pembelajaran. Juga, kualiti e-pembelajaran sepenuhnya memediasi hubungan antara pembelajaran organisasi dan penggunaan e-pembelajaran ($\beta = 0.65$, $t = 1.98$, $p < 0.05$) dengan ukuran kesan sederhana dan model mediasi menjelaskan 51.2% variasi penggunaan e-pembelajaran.. Halangan utama penggunaan e-pembelajaran adalah kekangan masa dan memperbaiki kandungan e-pembelajaran adalah cadangan yang paling popular untuk meningkatkan penggunaan e-pembelajaran.

Sebagai kesimpulan, kajian ini memberi pandangan berguna mengenai hubungan antara pembelajaran organisasi, kualiti e-pembelajaran dan penggunaan e-pembelajaran. Ia mencadangkan model *structural equation* yang lebih menjimatkan untuk mengkaji e-pembelajaran korporat dengan lebih berkesan dan menunjukkan persepsi tahap individu terhadap e-pembelajaran bagi penyelidik dan pengamal.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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I hereby confirm that:

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- the research conducted and the writing of this thesis was under our supervision;
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LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness-of-fit
AI	Artificial Intelligence
AVE	Average Variance Extracted
CBT	Computer-Based Training
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
ELSEE	E-learning Success System
EPSA	E-Pembelajaran Sektor Awam
GFI	Goodness-of-fit
IS	Information System
JKEUPM	Ethics Committee for Research Involving Human Subjects
LMS	Learning Management System
MOOC	Massive Open Online Courses
NFI	Normed-fit index
RMSEA	Root Mean Square Error of Approximation
SLAM	Strategic Learning Assessment Map
SRMR	Standardized Root Mean Square Residual
TAM	Technology Acceptance Model
TLI	Tucker Lewis Index
UTAUT	Unified Theory of Acceptance and Use of Technology
VIF	Variance Inflation Factor
VPN	Virtual Private Network

CHAPTER 1

INTRODUCTION

This chapter begins with the background of study. It continues with the statement of problem, highlighting the practical problem as well as the gaps in the literature in the area of e-learning use, e-learning quality and organizational learning. Next, it presents the research purpose, research questions, delimitations, assumptions and significance of the research. This chapter concludes with the definition of terms.

1.1 Background of Study

In today's fast-paced and competitive business world, working is inseparable from learning. As a result, learning in the workplace is the way for knowledge and skills to be developed and upgraded. The employees that possess the requisite knowledge and skills are the human capital that drive organizations to achieve goals and stay innovative. A strong human capital is an asset that ultimately leads to better productivity and contributes to the growth of the organization. Learning in the workplace generally happens in two ways: formally and informally (Owusu-Agyeman & Fourie-Malherbe, 2019). Formal learning includes traditional instructor-led trainings, e-learning and on-the-job trainings. Whereas informal learning happens through activities like mentoring, networking and collaboration. In contrast to the structured approach of formal learning, informal learning is ubiquitous (Nygren et al., 2019). In many situations of learning in the workplace, it is a combination of both formal and informal learning that put the autonomy of learning in the learners' hands and creates successful learning outcomes for the organization (Manuti et al., 2015; Misko, 2008).

Formal and informal learning in the workplace can be assimilated through the use of technology (Svensson & Ellstrom, 2004). In recent years, technology and learning at the workplace have become a necessary and beneficial symbiosis (Altinay et al., 2016; Maestro-Scherer et al., 2002). In the current knowledge-intensive marketplace, the symbiosis between technology and workplace-learning enables employees to have access to learning that meets the digital demands of their jobs (Sousa & Rocha, 2018). In recent times, a major part of the workforce is now made up of millennials who are a technologically savvy generation (Deal & Levenson, 2016; Harward, 2016). They expect flexibility and interaction in training by using learning technologies. Furthermore, for corporate organizations, learning technologies facilitates learning through flexible, cost-effective, customized and accessible learning environments.

Learning technologies at the workplace is a diverse field that includes e-learning, mobile learning, gamification, artificial intelligence and Massive Open Online Courses (MOOC). The variety of options does not necessarily guarantee a good learning outcome for the learner or the organization. The mere presence of technology in learning is not significant enough to bring about changes to an organization's learning environment. Learning at the workplace is often extremely specialized and very dependent on the context where it occurs. Therefore, learning technologies that are used must be designed to meet their specific requirements (Ley, 2020). As with traditional classrooms, it is their pedagogy and quality of resources incorporated with the technology that enables the organization's and individual's learning goals to be met. There is also the matter of digital divide that occurs at the individual and organizational level. The term digital divide refers to the gap that exists between individuals who have easy access to technology and those who do not. At an individual level, this divide exists because of differences in skill, age, availability of infrastructure, culture, attitude and occupation (Mwim & Kritzinger, 2016). At the organizational level, digital divide refers to the gulf between organizations that invest and use the right technology and those that do not. Unisys (2018) found that the quality of technology used in an organization has a significant relationship with employee attitudes, emotions and productivity.

In the past, e-learning was used predominantly in the academic sector but nowadays, e-learning has become a staple in learning and development activities of the corporate world. E-learning is "any type of learning, teaching or educational activity, which is based on computer and internet technologies" (Fallon & Brown, 2003, p. 4). Corporate e-learning is usually packaged as a Learning Management System (LMS) and has continued to evolve and grow as new trends emerge in the e-learning landscape (Bezhovski & Poorani, 2016). It has been a popular tool for organizational learning since the early 2000's due to its two-fold benefits for employers and employees. For employers, e-learning is appealing because it is flexible, easily accessible, scalable, cost-effective and can be tailored to the corporation's needs (Chen, 2008). Whereas for employees, e-learning offers an engaging learning experience at their own pace of learning, style and convenience (Lenoue et al., 2011).

There are a few key differences between corporate e-learning and academic e-learning (Prakash, 2018; Chang, 2016). Firstly, academic e-learning focuses on a broad scope to accomplish personal learning goals whereas corporate e-learning is specific to business needs. Secondly, individual characteristics is one of the main drivers for successful implementation of e-learning in the academic sector whereas organizational characteristics play an important role in corporate e-learning. Lastly, in order to keep up with new products, services and market conditions, e-learning in the corporate sector tends to evolve at a faster pace compared to e-learning in the academic sector.

Research that shed a positive light on corporate e-learning has been focused on two streams. The first stream studies the relationship between e-learning quality and the benefits received by individuals or organizations with e-learning use or user satisfaction as the mediator (Yakubu & Dasuki, 2018; Ojo, 2017; Chen, 2010). The second stream focuses on e-learning user satisfaction (Esterhuyse et al., 2016; Jafari & Batool , 2015; Ellis & Kuznia, 2014). There are also studies that investigate the barriers to e-learning at the workplace which include personal, situational, learning styles, content suitability, organizational, financial, instructional and technological barriers (Wang, 2018; Mungania, 2003). As every e-learner and organization is unique, the factors that affect the success or failure of workplace e-learning vary from place to place.

As with other countries around the world, e-learning has extended beyond educational institutions to many other sectors in Malaysia. For example, in the public sector, the Malaysian Government has established E-Pembelajaran Sektor Awam (EPSA) to encourage continuous learning for its civil servants via e-learning (Saad, 2012). In the private sector, industries have customized the e-learning programs with LMS to suit the needs of their businesses. Many of the companies that carry out e-learning in the private sector are multinational corporations with employees in different states or abroad. E-learning offers a way for these companies to implement a standardized curriculum for all their employees regardless of their location so that the company remains competitive on a global level.

While e-learning is used in various industries in Malaysia, limited research is available about it. Early research focused on adapting to e-learning and exploring the benefits it offers towards saving cost, time and increasing job performance (Harun, 2001). Then, the research began to shift to factors influencing the effectiveness of corporate e-learning such as the e-learning system's ease of use, management support and organization support (Ramayah et al., 2012). In recent times, the research has focused on factors influencing e-learning involvement which are a combination of individual characteristics such as attitude and computer self-efficacy, and organizational elements such as learning culture and management support (Belkhamza & Abdullah, 2019; Mangir et al., 2017; Tan & Rasdi, 2017).

Organizations are spoilt for choice with the plethora of e-learning systems, products, and services available on the market, but the variety also makes it difficult to choose the right one. While cost is often one of the deciding factors, organizations need to ensure the e-learning is of the highest possible quality (Macpherson et al., 2004). In any industry, a high-quality e-learning system enables employees to be trained regularly to develop their capabilities so the business can be run effectively (Schweizer, 2004). The need for high-quality e-learning to produce highly trained employees is especially critical for industries that are steeped in engineering and technology because the rapid changes and advancements in technology means these industries must keep up or lose out.

One such industry that uses e-learning to stay competitive is the oil and gas industry (McKevitt, 2007). The oil and gas industry can generally be divided into three sectors: upstream, midstream and downstream. The upstream sector deals with the exploration and early stages of production. The midstream sector involves processing, storing, transporting and marketing the unrefined oil and gas output. The downstream sector converts the unrefined oil and gas output into the finished product such as diesel, gasoline and natural gas liquids. Each segment from production to point of sale is complex and risky. In fact, the oil and gas industry has a higher fatality rate than many other industries (International Association of Oil & Gas Producers [IOGP], 2019). However, this is an industry where the benefits outweigh the risks as it generates so much revenue that some countries are willing to go to war over it (Juhasz, 2013). With the stakes being so high, it is important to have high-quality e-learning to equip the workforce with the right skills and knowledge. Training up employees is also important because one of the main challenges facing the oil and gas industry is its aging workforce. With more of its experienced employees retiring, the younger employees that are replacing them need to acquire the necessary knowledge and skills so that operations are not disrupted (Edwin, 2015). Learning is a top priority for this industry with as much as 87% respondents agreeing to its importance in a recent oil and gas trends survey (Deloitte Oil, Gas & Chemicals Sector, 2019).

With e-learning, oil and gas organizations are viewed as educational entities that conduct activities to cultivate individual and organizational learning to achieve its mission (Baets & Linden, 2003; Kraemer et al., 2002). An ideal organization is a learning organization. These organizations function as virtual corporate universities and have revolutionized training to organizational learning where employees are intellectual assets who work together to achieve the organization's goals (Ilyas, 2017). The top oil and gas companies around the world have established their own virtual corporate universities through online learning portals that contain practical, commercial and technical e-learning programs for their employees. For example, Shell has the Shell Open University, BHP has the Global Learning Management System, ExxonMobil has WorkSafe Learning Management System and in Malaysia, Petronas has myLearning.

By emphasizing on e-learning quality and organizational learning, the oil and gas industry endeavours to remain competitive in the current knowledge-based economy. While the jury is still out about their efforts, the employees' voice, the real users of e-learning, are often absent (Macpherson et al., 2004). Although the oil and gas industry are keenly aware of the necessity of high-quality e-learning and organizational learning, the value of an e-learning system is realized from the employees' use of it (Petter et al., 2013), which is often unknown. Therefore, the focus of this research was the relationships between organizational learning, e-learning quality and e-learning use.

1.2 Statement of Problem

E-learning enables organizations to assimilate learning and development into their employees' day-to-day work more effectively by fostering organizational learning through human capital development (Deloitte Insights, 2019). Therefore, ideally, poor e-learning use should not be an issue among employees of these organizations. However, despite the benefits of e-learning, organizations have discovered poor e-learning use among their employees (Klassen, 2019; Driscoll, 2008). When e-learning is poorly used, it indicates that employees are not getting the training that their companies intended for them. The lack of requisite training and skills results in poor performance and productivity, and higher turnover among employees (Akther & Tariq, 2020). The reasons for poor e-learning use vary from case to case but research identified three areas of constraints namely, organizational, e-learning system and content quality, and employee perception and characteristics (Choudhury & Pattnaik, 2020). Unfortunately, the three problem areas for poor e-learning use are often studied separately. This should not be the case because corporate e-learning is an intersection between the organization, technology and learners (Senderek, 2016), and research on poor e-learning use should study these three factors simultaneously.

As corporate e-learning begins as an organizational directive, organizational factors account for the success or failure of e-learning implementation and utilization (Wang, 2018; Cheng et al., 2012; Derouin et al., 2005; Sahijwani et al., 2005). This research focused specifically on the organizational learning aspect of organizational factors because studies have shown that organizational learning either makes or breaks the success of corporate learning programs (Arshad et al., 2016; Aragón et al., 2014; Bryson et al., 2006). The success of e-learning, like any technology, is defined by whether users are willing to use it (Tai, 2007). The organizational learning environment which includes corporate strategy, policy, individual and collective knowledge, skills, and competencies development and management often lay the foundation for the quality of e-learning in organizations. Some studies have established the relationship between organizational learning and e-learning quality (Yabesh et al., 2018; Liu et al., 2012). However, these studies do not contain the relationship of e-learning quality to e-learning use and organizational learning's indirect effect on e-learning use. The absence of studies that investigate e-learning quality as a mediator between organizational learning and e-learning use means there is a scarcity of insight for how all parties involved can create a conducive e-learning environment.

Stakeholders in the organizations decide the specifications of the e-learning system which reflects the quality of the e-learning system. The e-learning system's quality is also a major factor in the success or failure of e-learning implementation and utilization (Al-Fraihat et al., 2020; Mou & Rajib, 2019; Bhuasiri et al., 2012; Altarawneh, 2011). Previous studies have proven the relationship between e-learning quality and e-learning use (Yakubu & Dasuki,

2018; Dałhan & Akkoyunlu, 2016; Baraka et al., 2013; Chen, 2010), however, these studies do not include organizational learning as an antecedent to e-learning quality. The absence of organizational learning in this case hampers efforts for organizations to evaluate their organizational learning policies which has far reaching consequences for e-learning.

The varied nature of learners also makes corporate e-learning a dynamic field as there is no one guaranteed formula for good e-learning use. The demography of learners has been found to influence e-learning use (Mungania, 2004). However, most of the research has focused on the gender of employees (Yoo et al., 2015) or took place in the education sector (Wongwatkit et al., 2020; Tarhini et al., 2016; Islam, 2011). In a corporate setting there are other demography factors that would affect the organizational learning, e-learning quality and e-learning use such as the job functions, job levels and seniority. It is unrealistic to expect the level of these variables to be identical across these different demographic groups (Ley, 2020). However, there are barely any corporate e-learning studies that investigate the levels of these variables either overall or according to demography. The lack of these studies mean organizations are not able to appraise and address the organizational learning and e-learning quality gaps that could occur between demographic groups to improve e-learning use.

In Malaysia, although the corporate e-learning market is thriving (Nagpal, 2019), research on e-learning has focused mainly on the education sector (Yahaya & Jawi, 2020; Raman et al., 2019; Adnan & Zamari, 2012; Abas, 2009; Salleh, 2008). Even within the limited corporate e-learning literature that is available, most of the previous studies have either explored e-learning acceptance (Bakar & Jalil, 2017; Hashim, 2008) or e-learning participation (Belkhamza & Abdullah, 2019; Mangir et al., 2017; Tan & Rasdi, 2017). These studies do not show how an organization's learning environment and e-learning quality affect the use of the system. Furthermore, these studies do not identify additional barriers corporate e-learning users face for e-learning use. These barriers are often specific to each industry and its working conditions (Kumar & Gulla, 2011). The perception of users regarding the barriers faced for e-learning use is crucial as it provides valuable insights for improvement of e-learning use.

It is important to understand the relationships between organizational learning, e-learning quality and e-learning use, and the impact of demography on these variables so that organizations and educators alike can make decisions regarding corporate e-learning that make strategic and economic sense. Given that e-learning will continue to be a significant learning tool in organizations, it is important to identify the barriers to e-learning use and ways to overcome them in organizations. This research used a quantitative approach to address the research problems and its gaps.

1.3 Research Objectives

In order to accomplish the research purpose, this study was guided by the following research objectives:

1. To identify the levels, overall and according to demographic groups, of organizational learning, e-learning quality and e-learning use among corporate e-learners in a Malaysian company.
2. To investigate if e-learning quality mediates the relationship between organizational learning and e-learning use.
3. To identify the barriers to e-learning use in the organization.
4. To identify the improvements to e-learning use in the organization.

1.4 Research Questions

In order to accomplish the research purpose, this study was guided by the following research questions:

1. What are the levels, overall and according to demographic groups, of organizational learning, e-learning quality and e-learning use among corporate e-learners in a Malaysian company?
2. Does e-learning quality mediate the relationship between organizational learning and e-learning use?
3. What are the barriers to e-learning use in the organization?
4. How can e-learning use be improved in the organization?

1.5 Research Hypotheses

In order to accomplish the research purpose, the following research hypotheses are presented:

H1. There is a significant relationship between organizational learning and e-learning quality.

H2. There is a significant relationship between e-learning quality and e-learning use.

H3. There is a significant relationship between organizational learning and e-learning use.

H4. E-learning quality mediates the relationship between organizational learning and e-learning use.

1.6 Delimitations of the Study

This research was delimited by the choice of variables. E-learning research is a diverse field that looks into technological, organizational, social and individual characteristics. This study focused on organizational learning which consists of individual, group and organization learning levels, e-learning quality which consists of system, information and service quality, and e-learning use. It was also delimited by the theoretical frameworks, the IS Success Model and the 4I Organizational Learning Model.

This study was conducted in the oil and gas industry. Specifically, it was done in one Malaysian company in Sarawak. Participation was strictly voluntary and participants could withdraw from the study at any time and with no consequences. Participants were the employees of the company in Sarawak, both male and female, who have been enrolled in the e-learning programmes for at least one year.

1.7 Assumptions of the Study

This research was conducted based on a number of assumptions. First, the oil and gas industry was chosen because the complexity of the industry requires a high level of training and most of them implement e-learning in their companies. Therefore, the chosen company was assumed to have e-learning as part of their learning and development activities.

Next, it was expected that because anonymity was guaranteed, the participants would answer the questionnaire honestly. Furthermore, the perceptions of employees regarding e-learning quality, organizational learning and e-learning use was assumed to be an accurate assessment of the conditions in their workplace.

It was also assumed that the population size remained unchanged and the members remained homogeneous for the duration of the data collection. Therefore, it was believed that there would not be a difference in the research findings obtained from a convenient sample or random sample.

1.8 Significance of the Study

This research examined corporate e-learning in a new context. In prior literature, organizational learning and e-learning have been studied extensively but mostly as two separate entities. The present research brought them together and studied the roles that organizational learning and e-learning quality played

towards e-learning use. The research was also conducted in a new setting which is a Malaysian oil and gas company.

This research also could provide policy makers, e-learning content developers and stakeholders of corporations with empirical data regarding the relationship between organizational learning, e-learning quality and e-learning use. Furthermore, this study provided a bottom-up view of the challenges faced by e-learners and identified suggestions on how to improve e-learning use in the company. This could help them to plan and implement e-learning in such a way that it benefits all parties involved.

1.9 Definitions of Terms

The terms used in this research are shown below:

1.9.1 E-learning Quality

E-learning is a consequence of the assimilation of education and technology and has been regarded as a powerful tool for learning (Al-Fraihat, Joy, & Sinclair, 2017). It has moved beyond its traditional application in educational institutions into the workplace. E-learning in the workplace refers to corporate learning and development programs that are designed using information systems and delivered through various technical platforms (Serrat, 2017). E-learning quality at the workplace is understood in three contexts: the desirable characteristics of its information, the desirable characteristics of the e-learning system and the quality of the support that users receive from the information systems organization and IT support personnel (DeLone & McLean, 2016). In this study, e-learning quality encompasses the system quality, information quality and service quality of the company's e-learning system.

1.9.2 Organizational learning

Organizational learning is defined as a learning process within organizations that involves the collaboration of individuals, groups and the whole organization which leads to achieving the organization's goals (Popova-Nowak & Cseh, 2015). In this study, organizational learning comprises individual, group and organization learning levels that takes place at the research site.

1.9.3 E-learning Use

E-learning use refers to the degree and manner in which corporate e-learners utilize the capabilities of the e-learning system (DeLone & McLean, 2016). It covers the amount of use, frequency of use, nature of use and extent of use by its users in the company.

1.9.4 Corporate E-learners

Corporate e-learners are employees of an organization who use e-learning as a part of their learning and development activities (Yang, 2019). In this study, corporate e-learners are employees of an oil and gas company in Malaysia.

1.9.5 Mediator

A mediator is a variable that links the independent and the dependent variables, and whose presence explains the relationship between the other two variables (Allen, 2017). In this study, a variable is considered a mediator when changes in the independent variable produces changes in the mediating variable, which in turn impacts the dependent variable.

1.10 Summary

This chapter described the background of the study as well as the research problem. To address the research problem, four research questions and four research hypotheses were identified. Further, this research was governed by a set of delimitations and assumptions. The chapter closed by highlighting the significance of this study and the definition of terms. The next chapter on literature review discusses the broad topic of technology for workplace learning and corporate e-learning. It then narrows the discussion to e-learning use, organizational learning, e-learning quality and concludes with the theoretical and research framework.

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LIST OF PUBLICATIONS

Balakrishnan, S. M., Puad, M. H. M., & Ab Jalil, H. (2019, December 13). *Corporate E-learning Does Not Exist in a Vacuum: The Role of Organizational Learning as a Mediator* [Conference paper]. GREduc 2019, Kuala Lumpur, Malaysia.

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Balakrishnan, S. M., Puad, M. H. M., & Ab Jalil, H. (2021). The Role of E-Learning Quality in Mediating Organizational Learning and E-Learning Use Among Technical Employees. Manuscript submitted to Knowledge Management & E-Learning: An International Journal

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